

PABLO

NARRATIVE REPORT

JANUARY-DECEMBER 1964

Division of Wildlife Refuges

Narrative Report Routing Slip

Refuge PABLO Year 1964

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11-29-65

PABLO NATIONAL WILDLIFE REFUGE

Narrative Report

1964

REFUGE PERSONNEL

Cordia J. Henry, Refuge Manager, Moiese, Montana
Frank L. Kenney, Refuge Manager, Charlo, Montana

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Sport Fisheries and Wildlife
Fish and Wildlife Service
Charlo, Montana

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PABLO NATIONAL WILDLIFE REFUGE
Narrative Report
January 1, 1964 to January 2, 1965

I. GENERAL

A. Weather Conditions

For this report the temperature and precipitation are the same as those used by the Ninepipe National Wildlife Refuge.

The reservoir began the year completely frozen over, and it remained closed until March 18. Through most of this time heavy snows lay over the valley making travel at the reservoir impossible. The reservoir again closed about the middle of December driving the waterfowl to the Flathead lake and river.

In June a heavy rainfall precipitated a massive runoff from the Missions. The hottest day, July 12 the temperature reached 93. The coldest was December 17th when it dropped to minus 27, a spread of 120 degrees.

B. Habitat Conditions

Water: From a level of 3188.0 feet altitude which the reservoir maintained through the dormant winter months, it rose more than 20 feet in 60 days. Much of this occurred shortly after June 7th when 2.37 inches of rain fell in 24 hours. The draw-down began in July. At the end of the year, the level was at 3194.8, almost 7 feet above the beginning of 1964.

Food and Cover: Over the years, this reservoir has produced little duck food, but this year due to the unusual conditions a fair amount of smartweed ripened. Some spike rush was available. However, the high water level maintained throughout the season reduced the amount of shoreline browse so important to geese and widgeon. The diving ducks found especially favorable conditions.

II. WILDLIFE

A. Migratory Birds

Whistling Swan numbers were generally low. During the spring migration they used Flathead lake and again in December almost a hundred were counted in South Bay, about 4 airline miles from the reservoir.

Canada Goose nesting began in March with Pablo producing 27 goslings. Again, the rock island on the south side of Pablo was used as a nesting sight by one pair of geese.

During the summer molt, 5 geese were trapped and banded. More might have been caught if the drive had been held earlier in June when the molt was more pronounced.

About the 1st of May, 15 Snow, 60 Ross and 20 Canada Geese were using the reservoir. The Canada geese built up to 150 by the end of the month. The peak number was reached in early September when 1200 were counted.

Ducks: Due to floods and apparently a high skunk predation, nesting was poor. Mallards peaked at 15,000 in November, but a quick freezing over of the surface of Pablo reservoir dispersed them to the open waters of Flathead lake and the river. Around 8,000 Redheads converged on the refuge in October and remained as long as the water was open. Widgeon use 14% of the total duck use of the refuge and are second only to Mallards. A peak of 8,000 Widgeon occurred early in November. Mallards, Widgeon, Redheads, Pintails and Green-wing Teal make up 86% of duck useage.

Coot come in with the other waterfowl and remain most of the year. The top number was 10,000 in the fall.

Rails, Sora and Virginia were both in evidence and probably nested.

Water and Marsh Birds: Eared, Red-necked, Horned, Western and Pied-billed Grebes were all represented in small numbers never surpassing 50 throughout the summer. As many as 40 Great Blue Herons, 10 Cormorants and 7 Common Loons were found in the area. Only the Red-necked, Western and Pied-billed Grebes were known to have nested.

Shorebirds, Gulls and Terns: Commonly seen through the summer were Killdeer, Lesser and Greater Yellowlegs, Spotted Sandpipers and Dowitchers. Avocets vacated the area during the nesting season, but were seen in both spring and fall. Semi-palmated, Least, Western and Baird's Sandpipers were all represented in small numbers. Both the Black-bellied and Semi-palmated Plovers were found in August. In September a Piping Plover was seen on the inlet mud fan; one for the bird list. How many of these birds nested is not known. An effort will be made the following year to determine this.

B. Upland Game Birds

Pheasant: An extremely wet summer hampered reproduction. Six broods were seen. It is estimated that no more than 300 use the refuge. The cover, escapement, water availability and food resource are all excellent.

C. Big Game

Nothing to report.

D. Furbearers, Predators, Rodents and Other Mammals

Muskrats showed an increase over last year. Striped Skunks were numerous and it is suspected that bird eggs and hatchlings furnished part of their diet after the Microtus and Peromiscus populations subsided in May.

Weasels are found in the rip-rap of the dike in prevalent numbers.

A Beaver lives at the inlet canal.

E. Hawks, Eagles, Owls and Magpies

Hawks included the following: Marsh Sparrow, Swainson's, Red-tailed and Duck. A Prairie Falcon was also seen. Occasionally an Osprey visited during the summer.

Golden and Bald Eagles showed up simultaneously with the opening of the hunting season to feed on crippled birds. The peak number of eagles was 3 during the fall.

Both Horned and Short-eared Owls are represented throughout most of the year. As many as 50 Magpies and 14 Crows frequent the area in the warm weather months. The Duck hawks take considerable toll of the pheasants in the winter. As many as 4 can be seen waiting on the lower branches of the bare cottonwood trees for an unwary bird to fly beneath them.

F. Other Birds

During the summer both Eastern and Western Kingbirds were found. Red-winged and Yellowheaded Blackbirds are common. Sparrows include Tree, House, and Song.

Swallows of various subspecies were common. Audubon Warblers were very noticeable.

G. Fish

Fishing on Pablo was excellent with many of last year's plant being caught. May 1st of last year 12,000, 3 to 5 inch Rainbows were stocked by the State Fish and Game Department. In 14 months these fish were 10 to 11 inches in length.

H. Reptiles

Nothing to report

I. Disease

Nothing to report

III. REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Development

New recognition signs were erected at the two entrance gates.

B. Maintenance

Routine posting, fence repairs and general clean-up were the only matters taken care of under this heading.

C. Plantings

None

D. Collections and Receipts

See Ninepipe NR.

E. Control of Vegetation

No spraying done at Pablo this year. Limited spraying is planned for the next fiscal year.

F. Fires

A farmer burning stubble on adjacent Indian Tribal lands allowed his blaze to get away from him. High winds carried it across the refuge boundary. The plowed fire lane did not stop it. But this farmer and his son moved their disc-plows onto the refuge and contained the fire in a 140 acre field. Actually the fire was more beneficial than harmful in removing dead matted grass which choked out young suculent growth that might provide goose browse. No refuge equipment or personnel was used in its suppression. The fire wasn't even reported until after it was out.

G. Miscellaneous

Land-use and Fire Plans were submitted for this refuge. Amendments were made on the S and M plan, thereby enabling the granting of funds for 1966.

IV. RESOURCE MANAGEMENT

A. Grazing

Here, as at Ninepipe, the twenty-year interim between the last forage inventory and the present shows a great improvement in ground cover. Biologist Rouse, who made the 1945 survey stated that the refuge lands had been badly over-grazed.

Kentucky blue grass had all but disappeared. Cheat grass and annual weeds covered much of the upland. Today, Kentucky blue grass has assumed its rightful role as a primary forage plant. Quackgrass has largely replaced the cheatgrass on the north side of the refuge.

A total of 320 AUM's are utilized each year, confined to cattle from tribal permittees only. More grazing is needed to utilize the areas where the grass has become matted with dead growth. The earlier opening date, May 1, should allow cattle to feed off these areas keeping the grass growing and succulent so that they won't compete with waterfowl on the shoreline browse as the reservoir recedes.

*nesting?
ducks!*

The benefit of the new grazing plan has already been observed with geese grazing after cattle on the south side where the grass was closely cropped.

B. Haying.

None

C. Fur Harvest

One Indian trapper has permission to use area. He caught seven mink which sold for about \$9.00 each.

D. Timber Harvest

None

E. Commercial Fishing

None

V. FIELD INVESTIGATIONS AND APPLIED RESEARCH

A. Banding Waterfowl

The 5 Canada geese mentioned earlier, which were driven into traps during their flightless stage, is apparently the only banding accomplished here.

A weekly waterfowl census was made throughout the year. During the nesting and migration seasons, two weekly inspections of the area were made. Special attention was paid to the song and insectivorous birds resulting in at least one new bird for the bird list.

VI. PUBLIC RELATIONS

A. Recreational Use

Fishing was the most important use the public made, beginning with the end of the waterfowl season when sportsmen fished through the ice and ending with the closure the next fall. Bird watching and picnicking would be next. More information was needed for an accurate assessment of this facet.

B. Covered in Ninepipe NR

C. Covered in Ninepipe NR

D. Hunting

None of the refuge land was open to hunting of any kind. Outside the refuge on the state-owned lands, waterfowl and pheasant hunting was permitted. Local hunters, for the most part, took advantage of this. While the bags of both Canada geese and mallards were good, only a small number of hunters took to the field. Pheasant hunting was extremely poor, here, as it was over most of the valley.

E. Violations

On August 21st, Donald Hall, Polson mill worker, was arrested for fishing in a closed area on Pablo reservoir. He pled guilty and was fined \$25.00 by Lake Justice-of-the-Peace Gype.

F. Safety

See Ninepipe NR

VII. OTHER ITEMS

A. Photographs

SIGNATURE PAGE

Submitted by:

Tom J. Henry
(Signature)

Refuge Manager
(Title)

Date: _____

Approved, Regional Office:

Approved:
Feb. 1, 1965

Date: FEB 19 1965

William Elliott
(Signature) *WME*

W. J. Henry
Ref. Mgr.

Acting Chief, Division of Wildlife

(Title)

WATERFOWL

REFUGE Pablo, Pablo, Montana

MONTHS OF January 1

TO ^{April}~~December~~ 31, 19 64

(1) Species	(2) Weeks of reporting period									
	1	2	3	4	5	6	7	8	9	10
<u>Swans:</u>										
Whistling										
Trumpeter										
<u>Geese:</u>										
Canada										
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other										
<u>Ducks:</u>										
Mallard										
Black										
Gadwall										
Baldpate										
Pintail										
Green-winged teal										
Blue-winged teal										
Cinnamon teal										
Shoveler										
Wood										
Redhead										
Ring-necked										
Canvasback										
Scaup										
Goldeneye										
Bufflehead										
Ruddy										
Other										
<u>Coot:</u>										

WATERFOWL
Continuation Sheet

REFUGE Pablo, Pablo, Montana

MONTHS OF January

TO

April
~~December~~, 1964

(1) Species	(2) Weeks of reporting period								Estimated Waterfowl days use		
	11	12	13	14	15	16	17	18			
Swans:											
Whistling Trumpeter						1	1		14		
Geese:											
Canada				10	10	10	4	12	322		
Cackling											
Brant											
White-fronted											
Snow						3	1	15	133		
Blue Ross								58	406		
Other Total Geese				10	10	13	5	85	861		
Ducks:											
Mallard	FROZEN OVER	FROZEN OVER	25 1/2	2,000	200	500	1,550	600	34,125		
Black											
Gadwall						5	10	10	75	700	
Baldpate			2	1,000	1,200	350	1,000	1,600	36,064		
Pintail			5	1,000	500	250	700	800	22,785		
Green-winged teal				300	300	150	350	1,000	14,700		
Blue-winged teal											
Cinnamon teal											
Shoveler						4	50	150	200	2,828	
Wood											
Redhead							7	10	30	539	
Ring-necked							2	4	5	112	
Canvasback								50	5	385	
Scaup							5	65	25	1,190	
Goldeneye							10	60	10	665	
Bufflehead							2	2	4	70	
Ruddy									1	20	147
Other C. Merganser						2	10	10		5	189
R.B. Merganser									10		70
Hooded Merganser							2	2	28		
Foot: Total Ducks			32	4,302	2,245	1,511	3,852	4,429	114,597		
Int. Dup. Sec..		COOT		15	25	350	5,000	2,000	51,730		

WATERFOWL

REFUGE Patuxent, Charles, Kentom

MONTHS OF May 1, TO August 31, 1964

(1) Species	(2) Weeks of reporting period									
	May 3-9	May 10-16	May 17-23	May 24-30	May 31-June 6	June 7-13	June 14-20	June 21-27	June 28-July 4	July 5-11
	1	2	3	4	5	6	7	8	9	10
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada	30	30	75	150	75	75	75	75	75	110
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other Total Geese	30	30	75	150	75	75	75	75	75	110
Ducks:										
Mallard	2200	1100	700	500	600	700	1000	1000	1000	1000
Black										
Gadwall	50	25	25	25	50	50	50	50	50	50
Baldpate	900	150	50	15	15	10	10	10	10	50
Pintail	1000	200	50	15	25	50	75	75	75	75
Green-winged teal	200	250	100	100	150	25	25	25	50	75
Blue-winged teal	25	300	150	150	150	200	250	300	300	300
Cinnamon teal	4	100	25	25	25	50	100	100	100	50
Shoveler	100	100	25	25	25	50	50	50	50	50
Wood	2	2	2	2	5	10	15	20	20	20
Redhead	125	50	50	50	75	100	200	200	300	400
Ring-necked	50	10	4	4	4	4	5	10	10	10
Canvasback	25	5	1	1	1	1	1	1	1	1
Scaup	150	50	50	50	25	20	20	20	20	20
Goldeneye	4	4	2	2	1	1	1	1	5	10
Bufflehead	50	10	4	4	1	1	1	1	4	5
Ruddy	25	75	75	50	50	75	100	100	100	100
Other Common Herg.	15	15	10	10	15	20	25	25	25	25
Hooded Herg.		5	4	4	10	10	10	10	10	10
Total Ducks	4925	2446	1326	1021	1119	1369	1935	1995	2129	2250
Coot:	6000	2000	2000	2000	1500	1500	1500	1500	1500	1500

3 -1750a

Cont. NR-1

(Rev. March 1953)

WATERFOWL
(Continuation Sheet)REFUGE Pattee, Charlie, MontanaMONTHS OF May 1, TO August 31, 1964

(1) Species	(2) Weeks of reporting period								(3)	(4)		
	: July 12-18 : July 19-25 : July 26-Aug 1 : Aug. 2-8 : Aug. 9-15 : Aug. 16-22 : Aug. 23-29 :								Estimated	Production		
	: 11	: 12	: 13	: 14	: 15	: 16	: 17	: 18	: waterfowl	: Broods: Estimated	: seen : total	
: days use : seen : total												
Swans:												
Whistling												
Trumpeter												
Geese:												
Canada	125	150	250	500	600	650	650		25,865	8	25	
Cackling												
Brant												
White-fronted												
Snow							1		7	-	-	
Blue												
Other Total 1 Geese	125	150	250	500	600	650	651		25,872	8	25	
Ducks:												
Mallard	1,100	1,200	1,200	1,500	4,000	7,000	8,500		240,100	5	60	
Black												
Gadwall	50	50	50	50	50	100	150		6,475	2	10	
Baldpate	150	200	200	250	500	4,000	5,000		80,605	0	0	
Pintail	75	100	200	500	1,000	6,000	7,200		117,035	2	10	
Green-winged teal	100	150	150	150	200	500	750		20,300	1	5	
Blue-winged teal	300	300	300	300	400	1,000	1,000		40,075	8	28	
Cinnamon teal	25	25	25	25	50	150	150		7,133	0	0	
Shoveler	100	150	150	150	150	200	200		11,200	1	6	
Wood	20	20	20	100	100	100	100		3,936	1	6	
Redhead	500	600	800	1,200	1,000	2,000	2,500		65,050	1	4	
Ring-necked	10	10	10	10	25	25	25		2,582	0	0	
Canvasback	-	-	10	15	15	15	15		700	0	0	
Scaup	20	20	25	25	100	200	300		7,805	0	0	
Goldeneye	10	10	10	10	10	10	10		679	0	0	
Bufflehead	5	5	5	5	5	5	5		70	0	0	
Ruddy	150	150	150	200	200	200	200		14,000	2	10	
Other Common Herg.	25	25	25	25	25	25	25		2,185	0	0	
Hooded Herg.	10	10	10	10	10	10	10		1,691	0	0	
Total Ducks	2,650	3,025	3,340	4,525	9,840	21,540	26,140		440,885	23	139	
Coot:	1,500	1,750	1,500	2,000	2,000	2,500	4,000		253,750	5	25	
(over)												

	(5)	(6)	(7)
	Total Days Use	Peak Number	Total Production
Swans	0	0	0
Geese	25,872	650	25
Ducks	410,885	26,340	130
Coots	253,750	6,000	15

SUMMARY

Principal feeding areas and flats and shallow water areas
of reservoir.

Principal nesting areas upland around perimeter of
reservoir.

Reported by Leon A. Littlefield

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.
- (2) Weeks of Reporting Period: Estimated average refuge populations.
- (3) Estimated Waterfowl Days Use: Average weekly populations x number of days present for each species.
- (4) Production: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (5) Total Days Use: A summary of data recorded under (3).
- (6) Peak Number: Maximum number of waterfowl present on refuge during any census of reporting period.
- (7) Total Production: A summary of data recorded under (4).

W A T E R F O W L

REFUGE Pablo Refuge, Charlie, Montana

MONTHS OF September 1 TO December 31, 1961

(1) Species	(2) Weeks of reporting period									
	1	2	3	4	5	6	7	8	9	10
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada	1200	1200	900	400	800	800	550	900	850	1040
Cackling										
Brant										
White-fronted		3								
Snow	1	1						1	2	2
Blue										
Other Tot. Geese	1201	1204	900	400	800	800	550	901	852	1042
Ducks:										
Mallard	6000	9000	5000	8000	7500	8000	12,000	14,000	10,000	15000
Black										
Gadwall	150	150	150	150	200	250	500	500	500	200
Baldpate	3000	1000	1500	500	1000	1200	5,000	3,000	4,000	8000
Pintail	7000	2500	2000	1000	500	500	500	1,500	2,000	5000
Green-winged teal	1250	1000	1000	350	1000	1500	3,000	2,000	1,500	2000
Blue-winged teal	50	25	10	10	10	25	25			
Cinnamon teal	10									
Shoveler	10	25	50	150	150	200	500	500	250	100
Wood	75	50	25	25	25	25	25	20		
Redhead	1150	300	1000	500	150	100	8,000	8,000	6,000	6000
Ring-necked	10	15	50	50	250	300	1,000	1,500	500	500
Canvasback	5	10	15	50	50	150	2,000	1,200	1,200	1000
Scaup	10	15	25	25	25	50	1,750	150	1,000	1500
Goldeneye	3	5	5	10	10	25	200	30	30	200
Bufflehead	2	2	2	1	1	10	50	200	500	
Ruddy	150	200	100	500	350	300	200	500	100	1000
Other Com. Merganser	10	100	150	150	200	300	280	200	400	500
Hooded Merganser	5	10	50	50	100	150	300	500	800	600
TOT. DUCKS	18890	18,07	10632	8521	11521	13085	36,250	33,800	28,780	41600
Coot:	2000	2500	1500	5000	9000	10000	5,000	7,000	8,000	10000

WATERFOWL

REFUGE Fable Refuge, Charlie, Montana (Continuation Sheet) MONTHS OF September 1 TO December 31, 1964

(1) Species	(2) Weeks of reporting period								Estimated days	Waterfowl use
	1	2	3	4	5	6	7	8		
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada	1,000	500	575	120	180	20	0	0	79,315	
Cackling										
Brant										
White-fronted									21	
Snow									56	
Blue										
Other									79,402	
Ducks:										
Mallard	15,000	1,000	8,000	15,000	50	50	0	0	927,500	
Black										
Gadwall	100	50							20,300	
Baldpate	6,000	500	550						243,250	
Pintail	2,200	600	200	200					178,500	
Green-winged teal	1,000	100	200	200					124,800	
Blue-winged teal									1,085	
Cinnamon teal									70	
Shoveler	100	25							14,420	
Wood		5							1,925	
Redhead	5,000	500	300						259,000	
Ring-necked	500	200	120						31,265	
Canvasback	1,000	150	90						48,140	
Scaup	2,000	800	360	300					56,070	
Goldeneye	500	500	340	100	60	20	0	0	21,864	
Bufflehead										
Ruddy	500	100	50						28,350	
Other										
Can. Merganser	1,000	100	200	500					30,170	
H. Merganser	1,000	200	100	50					27,405	
Old Squaw	1									
Tot. Ducks	35,700	5,431	11,110	16,350	110	70	0	0	2005,941	
Coot:	1,000	1,000	1,000	1,000						

Refuge.....PABLO, Pablo, Montana

Months of January to April 1956

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u>					
Mourning dove	NONE				
White-winged dove					
IV. <u>Predaceous Birds:</u>					
Golden eagle	Previous Period	2	For Period	2 4/27	6
Duck hawk	" "	4	4/30	Still Present	8
Horned owl	" "	10	April	" "	20
Magpie	" "	25	3/31	" "	60
Raven	" "	2	March 2	4/21	4
Crow	3 3/31	8	April	Still Present	20
Red-tailed Hawk	2 3/27	6	4/30	" "	12
Rough-legged Hawk	Previous Period	6	3/27	1 4/10	12
Bald Eagle	" "	2	Feb.	1 3/13	3
Marsh Hawk	2 3/20	10	4/30	Still Present	20
Prairie Falcon	1 For	April			2
Short-eared owl	1 4/24	3	4/30	Still Present	6
Sparrow Hawk	1 4/3	2	4/30	" "	4
Reported by.....Leon A. Littlefield.....					

INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
 II. Shorebirds, Gulls and Terns (Charadriiformes)
 III. Doves and Pigeons (Columbiformes)
 IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

3-1751

Form NR-1A

(Nov. 1945)

MIGRATORY BIRDS
(other than waterfowl)Refuge Pablo, Charlie, MontanaMonths of May 1,to August 31, 1974

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. <u>Water and Marsh Birds:</u>										
Common Loon	Previous Period		7	5/31	Still	Present	•	•	•	10
Red-necked Grebe	•	•	35	6/ 6	•	•	•	Unknown	15	60
Horned Grebe	•	•	35	5/ 5	5	5/22	•	•	•	50
Hared Grebe	•	•	50	5/10	4	6/10	•	•	•	75
Western Grebe	•	•	15	6/ 6	Still	Present	•	Unknown	10	30
Pied-bill Grebe	•	•	17	6/ 6	•	•	•	•	10	30
Great Blue Heron	•	•	40	6/ 6	•	•	•	•	•	75
Double-crested Cormorant	10	5/26	10	5/26	10	5/26	•	•	•	10
II. <u>Shorebirds, Gulls and Terns:</u>										
Killdeer	Previous Period		500	8/ 6	Still	Present	•	Unknown	Unknown	1500
Piping Plover	1	8/14	1	8/14	1	8/14	•	•	•	1
Semi-palmated Plover	2	5/ 4	4	8/21	Still	Present	•	•	•	10
Black-bellied Plover	2	5/ 4	2	8/14	2	8/14	•	•	•	4
Greater Yellowlegs	2	5/ 4	250	8/31	Still	Present	•	•	•	1500
Lesser Yellowlegs	1	5/10	500	8/31	•	•	•	•	•	1000
Dowitcher	10	5/14	55	8/21	•	•	•	•	•	250
Avocet	5	5/ 4	15	8/31	•	•	•	•	•	75
Marbled Godwit	1	8/ 7	1	8/ 7	1	8/ 7	•	•	•	3
Spotted Sandpiper	Previous Period		150	8/ 7	Still	Present	•	Unknown	Unknown	1300
Baird's Sandpiper	5	8/21	5	8/21	•	•	•	•	•	100
Western Sandpiper	2	8/21	15	8/31	•	•	•	•	•	50
Least Sandpiper	5	8/ 7	35	8/31	•	•	•	•	•	100
Semi-palmated Sandpiper										

(shore birds continued on second page.)
(over)

(1)	(2)	(3)	(4)	(5)	(6)			
III. <u>Doves and Pigeons:</u>								
Mourning dove	2	5/10	250	6/7	Still Present	Unknown	Unknown	250
White-winged dove								
IV. <u>Predaceous Birds:</u>								
Golden eagle	None this period.							
Duck hawk	Previous Period	6	5/6	6	5/6	Unknown	Unknown	8
Horned owl	"	15	5/6	Still	Present	Unknown	Unknown	30
Magpie	"	50	6/21	"	"	"	"	250
Raven	None this period.							
Crow	Previous Period	14	6/7	Still	Present	3	8	35
Red-tailed Hawk	"	6	5/6	"	"	"	"	12
Swinson's Hawk	6	5/6	6	1	5/21	"	"	8
Marsh Hawk	Previous Period	18	6/7	Still	Present	Unknown	Unknown	20
Osprey	1 Occasional visitor for period.					"	"	2
Prairie Falcon	1	5/6	2	5/21	2	"	"	2
Short-eared Owl	Previous Period	15	5/21	Still	Present	Unknown	Unknown	40
Sparrow Hawk	"	60	6/21	"	"	"	"	90
Reported by Leon A. Littlefield								

INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

MIGRATORY BIRDS
(other than waterfowl) (continued)

Refuge Refugio, Chiricahua, Arizona Months of May 1, to August 31, 1954

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
<u>I. Water and Marsh Birds:</u>										
<u>II. Shorebirds, Gulls and Terns:</u>										
Wilson's Phalarope	50	5/ 1	60	5/11	Still	Present	-	-	-	300
Northern Phalarope	5	7/26	50	8/ 1	50	8/ 1	-	-	-	150
Common Snipe	Previous Period		25	8/15	Still	Present	-	Unknown	10	35
Ring-billed Gull	"	"	250	8/ 7	"	"	-	-	-	500
Franklin's Gull	5	7/14	5	7/14	5	7/14	-	-	-	10
Common Tern	2	5/ 2	5	6/ 7	Still	Present	-	-	-	-
Forrester's Tern	2	5/10	25	6/14	"	"	-	Unknown	7	35
Black Tern	2	5/10	25	6/14	"	"	-	"	5	35
Solitary Sandpiper	2	5/ 6	10	8/ 7	"	"	-	"	-	30
Long-billed Curlew	1	5/14	1	5/14	1	5/14	-	-	-	3

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons</u> :					
Mourning dove					
White-winged dove					
IV. <u>Predaceous Birds</u> :					
Golden eagle					
Duck hawk					
Horned owl					
Magpie					
Raven					
Crow					
				Reported by <u>Leon A. Littlefield</u>	

INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
 II. Shorebirds, Gulls and Terns (Charadriiformes)
 III. Doves and Pigeons (Columbiformes)
 IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

3-1751

Form NR-1A
(Nov. 1945)

MIGRATORY BIRDS

(other than waterfowl)

Refuge Pa bloMonths of September to December xx 64
195

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. <u>Water and Marsh Birds:</u>										
<u>Common Loon</u>	Previous	Period	7	Oct 1	Explanation: Departure dates of these birds is unknown since the refuge was not staffed during their usual period of departure.					
<u>Red-necked Grebe</u>	"	"	5	"						
<u>Horned Grebe</u>	"	"	10	"						
<u>Hared Grebe</u>	"	"	8	"						
<u>Cormorant</u>	"	"	10	"						
<u>Great Blue Heron</u>	"	"	40	"						
II. <u>Shorebirds, Gulls and</u>										
<u>Terns:</u>										
<u>Killdeer</u>	Previous	period	400	Oct 1						
<u>Black-bellied plover</u>	"	"	10	"						
<u>Greater Yellowlegs</u>	"	"	40	"						
<u>Lesser Yellowlegs</u>	"	"	5	"						
<u>Long-billed Dowitcher</u>	"	"	200	"						
<u>Spotted Sandpiper</u>	"	"	100	"						
<u>Baird's</u>	"	"	100	"						
<u>Wes tern</u>	"	"	10	"						
<u>Least</u>	"	"	50	"						
<u>Wilson's Phalarope</u>	"	"	10	"						
<u>Ring-billed gull</u>	"	"	750	"						
<u>Piping plover</u>	1	Sept 1	Not seen again. (First for refuge)							

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u>					
Mourning dove	Previous Period	25	9/7	Unknown	
White-winged dove					
IV. <u>Predaceous Birds:</u>					
Golden eagle	Previous Period	3	Still present		
Duck hawk	" "	4	" "		
Horned owl	" "	2	" "		
Magpie	" "	50	" "		
Raven	" "	2	" "		
Crow					
Bald Eagle	Previous Period	3	" "	" "	
Short-eared Owl	" "	2	" "	" "	
				Reported by <u>Frank Kenney--Leon Littlefield</u>	

INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
 II. Shorebirds, Gulls and Terns (Charadriiformes)
 III. Doves and Pigeons (Columbiformes)
 IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

3-1750
Form NR-1B
(December 1956)

UNITED STATES
DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service

WATERFOWL UTILIZATION OF REFUGE HABITAT

Refuge Pablo, Charlo, Montana For 12-month period ending August 31, 1964

Reported by Leon A. Littlefield Title Refuge Manager

(1) Area or Unit Designation	(2) Habitat		(3) Use-days	(4) Breeding Population	(5) Production	
	Type	Acreage				
Entire refuge is considered as one unit.	Crops	100A	Ducks	1,230,005	200	139
	Upland	300A	Geese	166,768	16	25
	Marsh	70A	Swans	287	-	-
	Water	2070A	Coots	314,532	50	15
	Total	2540A	Total	1,711,592	266	179
					
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			
.....						
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			
.....						
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			
.....						
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			
.....						
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			

(over)

UNITED STATES
DEPARTMENT OF THE INTERIOR
Bureau of Reclamation
3-1750
(December)

All tabulated information should be based on the best available techniques for obtaining these data. Estimates having no foundation in fact must be omitted. Refuge totals for all categories should be provided in the spaces below the last unit tabulation. Additional forms should be used if the number of units reported upon exceeds the capacity of one page. This report embraces the preceding 12-month period, NOT the fiscal or calendar year, and is submitted annually with the May-August narrative report.

(2) (4) (3) INSTRUCTIONS (2) (1)

- (1) **Area or Unit:** A geographical unit that, because of size, terrain characteristics, habitat type and current or anticipated management practices, may be considered an entity apart from other areas in the refuge census pattern. Estimated acreage of each unit should be indicated.
- (2) **Habitat:** Crops include all cultivated croplands such as cereals and green forage, planted food patches and agricultural row crops; upland consists of all uncultivated terrain lying above the plant communities requiring seasonal submergence or a completely saturated soil condition a part of each year, and includes lands whose temporary flooding facilitates use of non-aquatic type foods; marsh extends from the upland community to, but not including, the water type and consists of the relatively stable marginal or shallow-growing emergent vegetation type including wet meadow and deep marsh; and the water category includes all other water areas inundated most or all of the growing season and extends from the deeper edge of the marsh zone to strictly open-water areas, embracing such habitat as shallow playa lakes, deep lakes and reservoirs, true shrub and tree swamps, open flowing water and maritime bays, sounds and estuaries. Acreage estimates for each type should be kept as accurate as possible through reference to available maps supplemented by periodic field observations and should agree with unit acreage.
- (3) **Use-days:** Use-days is computed by multiplying weekly waterfowl population figures by seven.
- (4) **Breeding Population:** An estimate of the total breeding population of each category of birds for each area or unit.
- (5) **Production:** Estimated total number of young raised to flight age.

Interior Duplicating Section, Washington, D. C.
1956

3-1752
Form NR-2
(April 1946)

UPLAND GAME BIRDS

Refuge Pablo, Montana Months of January to April, 19 64

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Ringnecked Pheasant	Shrub - 200 Grass - 1000 Marsh - 100 Cropland - 100	4.5	None		IM:2F	None	.	.	300	

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. - Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

3-1752
Form NR-2
(April 1946)

UPLAND GAME BIRDS

Refuge Pablo, Charlie, Montana

Months of May 1, to August 31,, 19 44

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Ring-necked Pheasant	Grass 300A Marsh 70A Crops 100A		6	35	1M: 3F	None	-----		300	Extremely wet summer Drastically reduced brood success.

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
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- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
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* Only columns applicable to the period covered should be used.

3-1752
Form NR-2
(April 1946)

UPLAND GAME BIRDS

Refuge Pablo Months of September to December, 19 64

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Ring-necked Pheasant	Grass....300A Marsh.... 70A Crops....100A	1.6			1M:3F				300	

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
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- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

PUBLIC RELATIONS
(See Instructions on Reverse Side)

Refuge PabloCalendar Year 1964

1. Visits

a. Hunting None b. Fishing 2000 c. Miscellaneous 500 d. TOTAL VISITS 2500

1a. Hunting (on refuge lands) None

TYPE	HUNTERS	ACRES	MANAGED BY
Waterfowl			
Upland Game			
Big Game			
Other			

Number of permanent blinds _____

Man-days of bow hunting included above _____

Estimated man-days of hunting on lands adjacent to
refuge _____

1b. Fishing (area open to fishing on refuge lands)

TYPE OF AREA	ACRES	MILES
Ponds or Lakes	<u>2000</u>	
Streams and Shores		

1c. Miscellaneous Visits

Recreation 400 Official 60Economic Use 40 Industrial _____

2. Refuge Participation (groups) Reported on Ninepipe Narrative

TYPE OF ORGANIZATION	NO. OF GROUPS	NUMBER IN GROUPS	NO. Of GROUPS	NUMBER IN GROUPS
Sportsmen Clubs				
Bird and Garden Clubs				
Schools				
Service Clubs				
Youth Groups				
Professional-Scientific				
Religious Groups				
State or Federal Govt.				
Other				

3. Other Activities

TYPE	NUMBER	TYPE	NUMBER
Press Releases		Radio Presentations	
Newspapers (P.R.'s sent to)		Exhibits	
TV Presentations		Est. Exhibit Viewers	

INSTRUCTIONS

Item 1: Total of a, b, and c, equal d.

"Visit" - definition. Any person who is on refuge lands or waters during a day or part thereof for the purpose of: hunting, fishing, bird-watching, recreation, business or economic use, official visit, or similar interest. INCLUDE - those who stop within the refuge while traveling on a public highway because of an interest in the area. EXCLUDE - persons engaged in oil or other industry not directly related to the refuge, persons using refuge as most direct route or principal avenue of traffic, and those boating on navigable rivers or the Intercoastal Canal, unless they stop to observe wildlife on the refuge.

Computing visits. Where actual counts are impractical, "sampling" is used with midweek and week-end samples varied by season or weather. A conversion factor of 3.5 (of passengers per car) is used when accurate figures are not available. Each refuge will develop a conversion factor for boats based on range of usage. Count a camper once for each 24-hour period or fraction thereof.

Item 1a: Acres - of refuge open for each type of hunting.

Managed hunts require check in and out of hunters, issuance of permits, or assignment of blinds.

Other - INCLUDE crow, fox, and similar hunting.

Lands adjacent to refuge. Normally considered within 1 mile or less of boundary, unless established sampling procedures cover a wider area. For big game hunting, the distance may be greater.

Item 1b: Acres of streams open to fishing, if practical; otherwise just miles open. Information on "shores" is primarily for coastal fishing.

Item 1c: Recreation. INCLUDE photography, observing wildlife, picnicking, swimming, boating, camping, visitor center use, tours, etc. TOTAL Recreation, Official, and Economic Use visits under Item 1.

Industrial. INCLUDE persons engaged in industry, i.e., oil industry or factories. EXCLUDE these from Item 1.

Item 2: INCLUDE the "On Refuge" groups in Items 1c and 1. In "Off Refuge" column include only those group meetings in which refuge employees actually participate. EXCLUDE these from Items 1c and 1.

Item 3: Exhibits - INCLUDE displays, fairs, parades, and exhibits OFF the refuge; EXCLUDE those ON.